

**Notice of Allowability**

Application No.

09/662,068

Examiner

NGOC V. DINH

Applicant(s)

TALBOT ET AL.

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/04/05.
2. ☒ The allowed claim(s) is/are 53 and 56-74.
3. ☒ The drawings filed on 28 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### **DETAILED ACTION**

1. This Office Action is in response to Amendment filed 05/04/2005.

Claims 1-52, 54-55 have been cancelled

Claim 53, 56-70 have been amended.

Claims 71-74 have been added.

### **Reasons For Allowance**

2. The primary reasons for allowance of claim 53 in the instant application is the combination with the inclusion of at least the limitation of "determining an order of precedence based on the available target memory addresses whether the plurality of memory access requests are read requests or write requests, and the age of each of the plurality of memory access requests. wherein a first precedence is given to the memory access requests having available target memory addresses, a second precedence is given to the memory access requests that are read memory requests and a third precedence is given to the memory access requests that are newer in age. Reordering the initial order to a new order based on the order of precedence without regard to a status of the plurality of data processors'.

Because claims 71, 72 depend directly on claim 53. These claims are considered allowable for at least the same reasons noted above.

The primary reasons for allowance of claim 56 in the instant application is the combination with the inclusion of at least the limitation of " reordering the memory access requests according to a predetermined precedence order defined by a set of rules, without regard to the state of the plurality of processors. Wherein the rules comprise:

establishing a first precedence for any of the plurality of memory access requests that have a corresponding available target address; establishing a third precedence for any of the plurality of memory access requests based on age of the plurality of memory access requests."

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Because claims 57-61 depend directly or indirectly on claim 56. These claims are considered allowable for at least the same reasons noted above.

The primary reasons for allowance of claim 62 in the instant application is the combination with the inclusion of at least the limitation of “a reordering unit configured to reorder the first order of the plurality of memory access requests into a second order without regard to a status of the plurality of the processors, the second order based on a first precedence of available memory locations, a second precedence based on a type of memory request and a third precedence based on ages of the memory access requests”.

Because claim 63 depends directly on claim 62. This claim is considered allowable for at least the same reasons noted above.

The primary reasons for allowance of claim 64 in the instant application is the combination with the inclusion of at least the limitation of “the ordering module configured to reorder the receiving order into the execution order wherein any memory requests with available target memory locations take precedence over any other memory requests with unavailable target memory wherein read memory requests take precedence over any write memory requests and where older memory requests take precedence over younger memory requests regardless of the state of the plurality of processors”.

Because claims 65-67 depend directly on claim 64. These claims are considered allowable for at least the same reasons noted above.

The primary reasons for allowance of claim 68 in the instant application is the combination with the inclusion of at least the limitation of “determining an order of execution precedence based on available target memory location, type of memory access requested, and an age of the memory access request; reordering the initial order of the plurality of memory access requests with respect to the execution preferences wherein the plurality of processors are unaware of the reordering”.

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Because claims 73-74 depend directly on claim 68. These claims are considered allowable for at least the same reasons noted above.

The primary reasons for allowance of claim 69 in the instant application is the combination with the inclusion of at least the limitation of "reordering said the plurality of memory access requests without regard to the status of the plurality of processors. such that the first memory access requests for servicing are those with available target memory, the second memory access requests for servicing are read and write requests, wherein read requests follow write requests that are requesting access to an identical target address and the third memory access requests for servicing are based on age of the memory access request'

Because claim 70 depends directly on claim 69. This claim is considered allowable for at least the same reasons noted above.

### **Conclusion**

3. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ngoc Dinh whose telephone number is (571) 272-4191. The examiner can normally be reached on Monday-Friday 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks, can be reached on (571) 272-4201. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

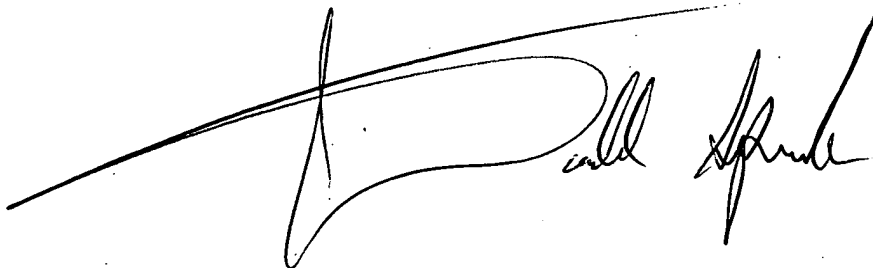


NGOC DINH

Patent Examiner.

ART UNIT 2189

July 15, 2005



**DONALD SPARKS**  
SUPERVISORY PATENT EXAMINER